Environmental Security Technology Implementation Committee (ESTIC) Workshop

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SAF/MIQ

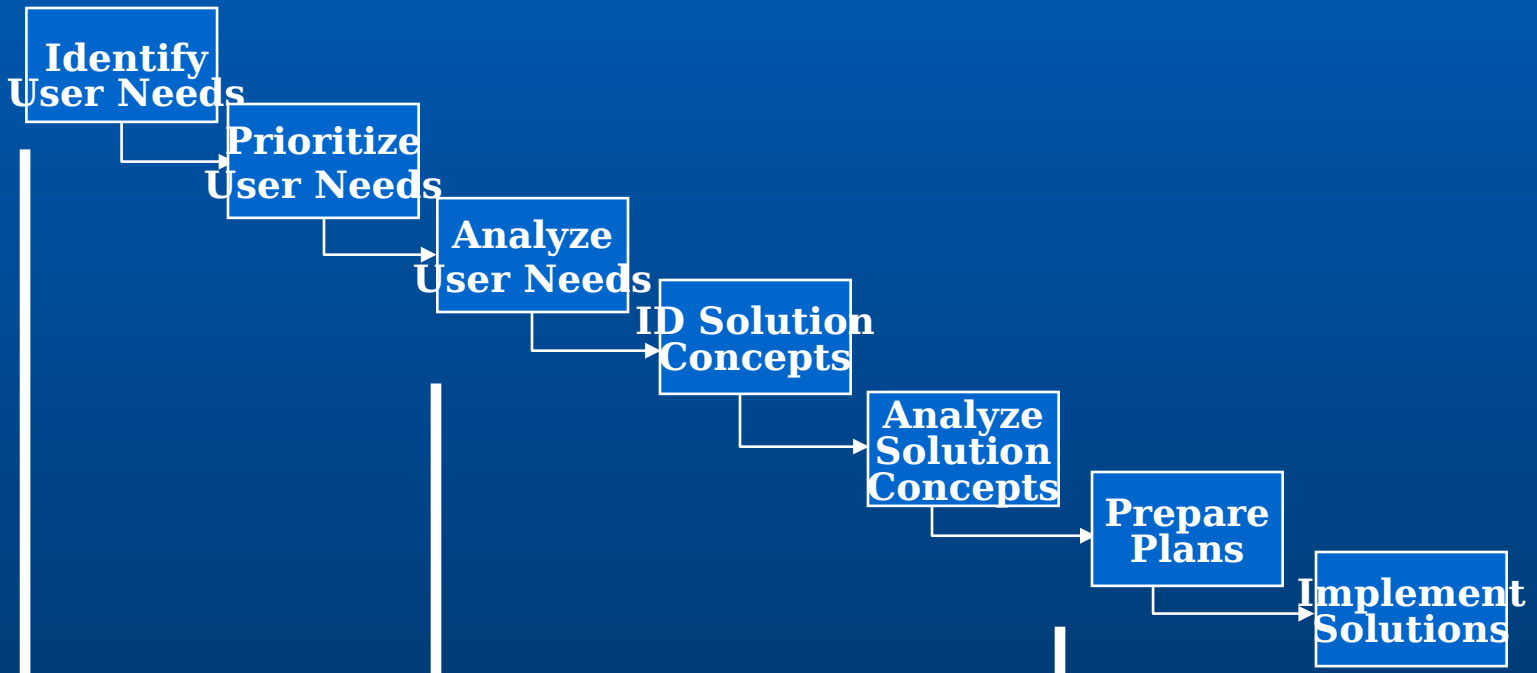
Purpose

- Discuss Air Force environmental technology program

Overview

- User Requirements
- Program Management
- Funding
- Buy-in
- Military Technologies That Address ESOH User Requirements
- Technology Transfer
- Cost and Performance
- Practical Application of Technologies Output From Program to Date
- Recommendations for Improvement

Needs to Solutions



TNS Process

NAS Process

Development Plans

Solutions

User Requirement

Military Technologies that Address ESOM User Requirements

Funding; Buy-In; Prog Mgmt; Cost & Performance

Practical Applicatio of Technologies

Technology Transfer

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User Requirements
ESOH Planning Process

Identify User Needs

Prioritize User Needs

Analyze User Needs

ID Solution Concepts

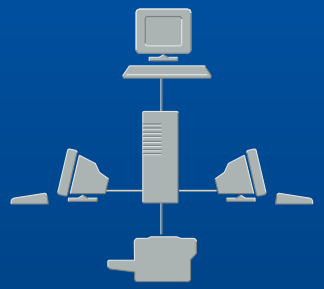
Analyze Solution Concepts

Prepare Plans

Implement Solutions

User Requirements Background

- ESOH TPIPT Planning Process Collects ESOH Needs
  - Technology Need Survey (TNS)
  - Process *Totally* Web Based
  - Bi-annual Field Visit; 28 page questionnaire
  - Data Gathering Within SG, CE, SE, AQ and LG Communities
  - Front-end for HMRPP and JG-PP reqmts



User Requirements Validation

- Prioritized List (rank order 1-n)
  - 7 Weighted Criteria
- Designed to Focus on High and Medium Ranked Needs (E, S and H)

Assessment: **Green** (AF issue)

-Defensible, reproducible list

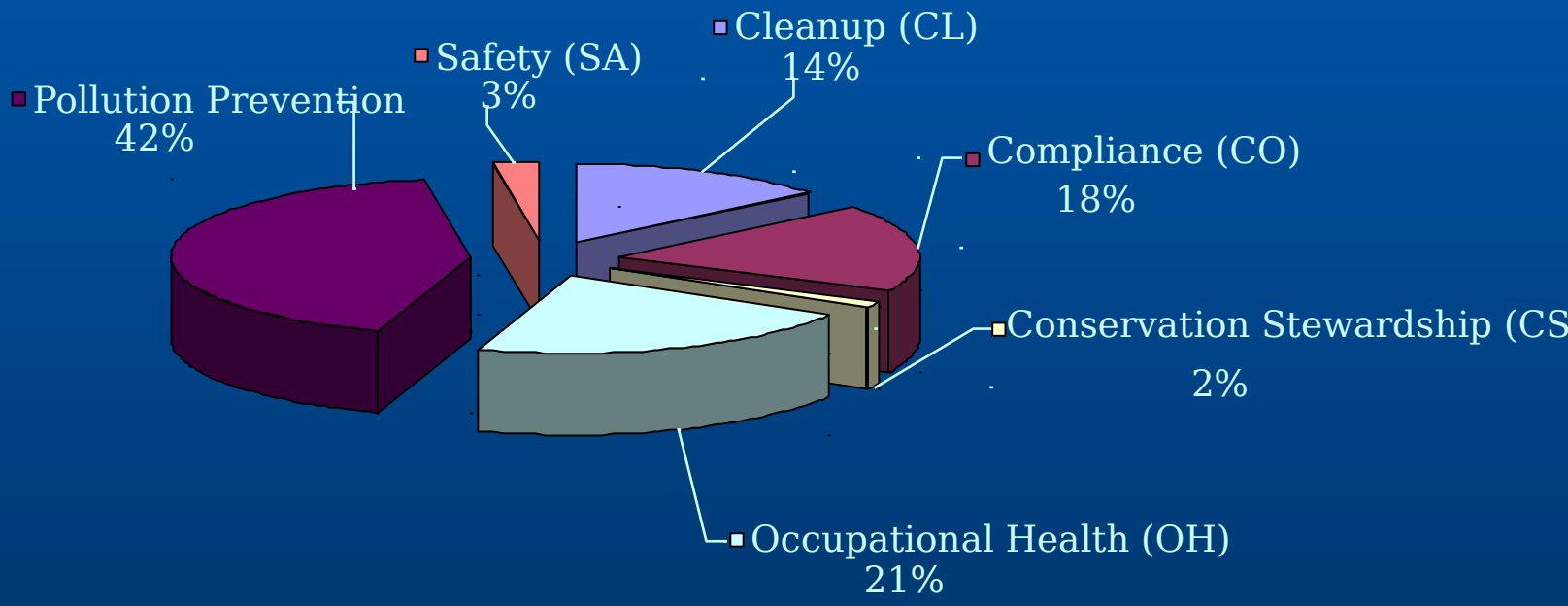
-Stovepipe execution remains a problem

User Requirements
Rank Order Criteria

Factors	Percent
Human Hazard Severity	35%
Mission Impairment	29%
Environmental Hazard Severity	14%
Pervasiveness	10%
Cost of Not Fixing	6%
Regulatory Risk	4%

User Requirements Results

461 Technology Needs



130 Non-Technology Needs

591 Total Needs

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Program Management

Program Management Prepare Plans

- Development Plan
  - Implementation Plan….*how*
  - Project Management Plan*…what steps*
- Input to Air Force Modernization Planning
  - MSP, MAP and ORD

- **Assessment: Yellow** (AF issue)
  - Modernization planning means “POM +”
  - Process came late; offset needed for current year dollars

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Funding
Financial Planning

- Move Technologies to Appropriate AF "Warehouses"
  - P2 Technologies Referred to AFMC Integrated Product Team (CTIO, JG-PP, etc.)
  - Environmental Technologies to AFCEE
  - OH Technologies to IERA
  - Safety issues to the AF Safety Center
- SG Moved $10M FY97 to Solutions Identified
- CE and LG leverage O&M $ for P2

Funding

- FY ‘01 Env Program Funding Technology
  - S&T (3600) **$0**
  - P2 DEM/VAL (3600) **$2.5 M**
  - Weapon System P2 (3400) **$10 M**
  - Technology Adaptation (Cleanup) **$5 M**
- **Assessment: Red** (AF issue)
  - No overarching program exists….leveraging?!

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Buy-In

- “Buy-in” means somebody actually wants the technology
- Environmental community identifies technology, evaluates technology and warehouses information
- Customer decides if it is ever implemented
  - Installation (regulatory drivers)
  - Industrial (process owner)
- **Assessment: Red** (DOD issue)
  - Definition of end user key
  - Successful when E $$ buy-out the problem
  - “Operationalize” technology cost to the customer

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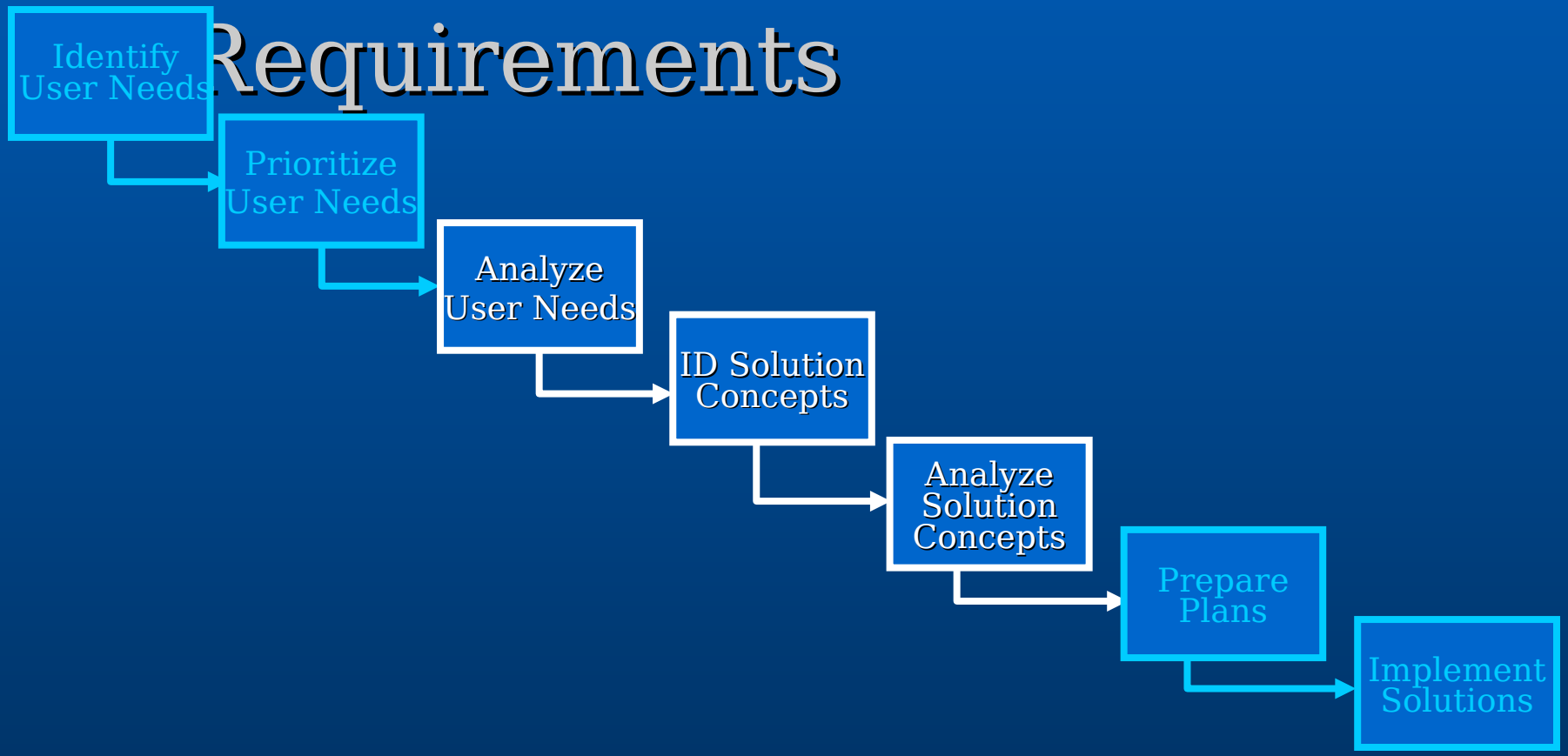
Military Technologies That Address ESOH User Requirements



Military Technologies That Address ESOH User Requirements

- Needs Assessment Summary (NAS)
  - 5-7 pages with options (short, mid and long term)
  - Identifies Policy and Training deficiencies
  - Army, Navy, DOE and Commercial Options
  - 257 completed NASs
- Stored Information Analyzed and Linked to Solutions (COTS, GOTS, R&D)
- Vendor Searches Can Reach Needs
- Spectrum of Options (NMS to AF R&D start)

Military Technologies That Address ESOH User Requirements

- Assessed in Survey: AF Labs; DOE Labs
  - 130 COT's evaluated
    - Industry solutions have no where to go to be approved
    - 2 Soviet proposals referred to State Department
  - 22 DOE Labs participated
    - Over 400 R&D programs reviewed
    - 2 solutions found
- **Assessment: Yellow** (DOD issue)
  - Hard to leverage across Service/Federal lines…AF $ to support DOE Lab program
  - Why aren't we focusing more on COT's and GOT's? … capitalize on the investment made

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Technology Transfer

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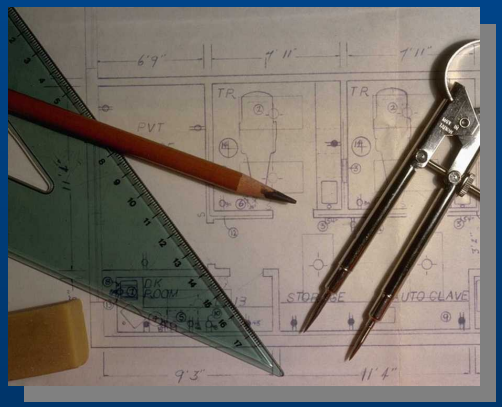
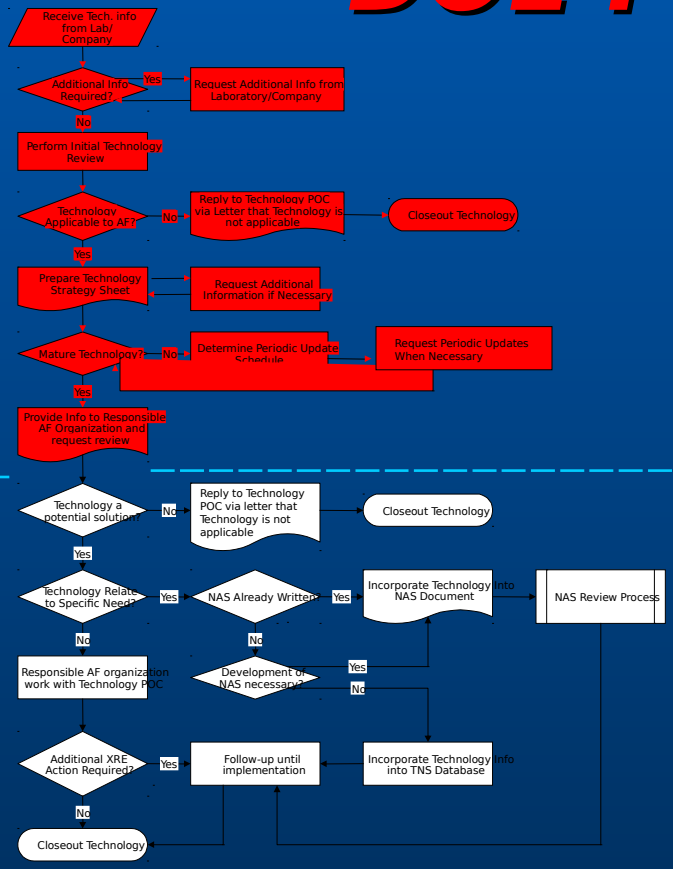


Technology Transfer

- COT's Issue:
  - Installation (restoration)
    - Six Phased Soil Heating (PNNL-Shell Corp)
    - Still requires regulatory buy-in
  - Industrial (P2 Technology)
    - Plating Bath Recycling Booth (LANL)
    - 2 years and still in staffing!!
- **Assessment: Red** (DOD issue)
  - Hard to move technology across Service/Federal lines

We Assess Solution Options

DOE Flowchart



IDENTIFICATION

ASSESSMENT

AF STAFFING

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Cost and Performance

- NONE

- **Assessment: Red** (AF issue)
  - Based on return on investment (2 year payback)
  - Stuck in ‘stovepipes’
  - Can’t compete with line requirements

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Practical Application of Technologies Output From Program To Date

- 125 bioventing sites
- 50+ natural attenuation sites
- 45+ bioslurper sites
- 4 dual-phase extraction units in place

- **Assessment: Yellow** (AF Issue)
  - Successes exist in restoration
  - No overarching program to tie efforts together in other pillars

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Recommendations for Improvement

- AF Issues:
  - Need overarching strategy for execution
  - Need to leverage heavily from other Services (Labs, NDCEE, Navy FAST, etc)
  - Need to import other Service's successes
  - 'Operationalize' costs to line…show them our operational value
  - Continue our focus on modernization planning

Recommendations for Improvement

- DOD Issues:
  - Need common list of Service reqmts
  - Need to define how technology transfer equates to operator/process owner
  - Need to leverage across Service/Federal lines….who gives the seal of approval
  - Need a process that focuses on COT’s and GOT’s first! ….R&D should be a last resort